



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/894,016	06/28/2001	Jeffrey Scott Chase	RSW9-2001-0045-US1	4982

7590 09/16/2004

Mark D. Simpson, Esquire
Synnestvedt & Lechner
2600 Aramark Tower
1101 Market Street
Philadelphia, PA 19107-2950

EXAMINER

JAROENCHONWANIT, BUNJOB

ART UNIT	PAPER NUMBER
----------	--------------

2143

DATE MAILED: 09/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/894,016

Applicant(s)

CHASE ET AL.

Examiner

Bunjoo Jaroenchonwanit

Art Unit

2143

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Application has been reviewed, claims 1-9 are presented for examination, all claims are analyzed and rejected, in light of the specification. The rejection cited are as stated below.
2. In the specification Applicant admitted that the following teaching are prior art:
 - Server switch (Page 2, lines 2-6);
 - Hashing switch is prior art (fig.1, Page 3-Page 4);
 - Content Based Routing "CBR" (Page 2, lines 7-15);
 - Domain name associated with IP address (Page 3, lines 2-5);
 - Switching for balancing load among server farm (Fig. 1, Page 3, lines 16-22);
 - URL hashing switch (Page 4, lines Fig. 1, Page 4, lines 1-14);
 - Balancing load among server farm or back end server by using front-end processor (Page 4, lines 15-23);

Further, in light of the specification, the term "hashing" referred to any form of routing based on content included CBR (Page 2, lines 7-15). Caching/Hashing switch is referred to a device or devices, which could be a single unit or separate units, but are capable of performing both caching and switching functions (specification page 7, lines 8-10 (16)).

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2143

4. Claims 1 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art (AAPA) and Colby et al (US. 6,006,264).

5. Regarding claims 1 and 9, as aforementioned above applicant admitted most of the elements in the claims were prior art in the exception of the caching, which in light of specification, a convention hashing switch is associated with cache for storing the requested content and passing the stored content to a requestor if the cache had the requested content, stored therein. Nevertheless, the caching and redirecting conceptual is not novelty. They have been utilized in various cache-routing based, prior the applicant invention was made. For instance, Colby et al (referred to as "Colby", hereinafter), teaches an inventive concept of Content-Aware Flow Switch (CFS), which *inter alia*, includes a concept, which could be easily adopted to and modified the convention hashing switch to provide caching function, as claimed. Colby, further disclosed, the CFS included a Content Server Database (CSD) for identifying whether the requested content is at locality before performing switching function, e.g., redirecting, the request to a remote server (Fig. 3, and corresponding details). Furthermore, Colby suggested the CFS having advantages of balancing workload for servers farm, i.e., load balancing, and having a capability to identifier front end resources, i.e., identifier locality content, for Quality of Service (QOS) improvement (Col. 3, lines 36-52). Thus, it would have been obvious to one of ordinary skilled in the art at the time of the invention was made to modify a conventional hashing switch by incorporating caching mechanisms, such as local server, and the notion of checking local content before sending the request to a server in the servers farms. In order to balance load of the servers as suggested by Colby, with the motivation of improving QUALITY OF SERVICE as suggested in Colby. By this rationale claims 1 and 9 are rejected.

Art Unit: 2143

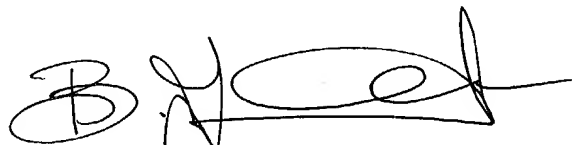
6. Claims 2-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of AAPA and Colby as applied to claims 1 and 9, above, and in view of Cielsak et al. (US. 6,240,461)
7. Regarding claims 2-8, AAPA-Colby disclose the invention substantially as claimed, as described in claim 1, but they do not explicitly disclose hashing an unfound content received from a remote server into the cache. However, the hashing content technique for hashing content from a server into a cache or local server storage is also not new idea. Such technique was being used to improve network traffic, web content provider efficiency, long before the applicant invention was made. For this instance, Cielsak et al (referred to as "Cielsak", hereinafter) discloses a method and apparatus for improving network data traffic, which is capable of determining whether a requested object is in cache of course, it also determines whether the requested object is in a local or any specific servers. If the object were not in at the specific cache location, it would make a request for the object to store in the cache or locality, i.e., updating cache, and then forward the content to the client who requested the content, respectively (see Cielsak, Fig. 2, 216-224). Thus, it would have been obvious to one of ordinary skilled in the art at the time of the invention was made to incorporate Cielsak's technique of updating locality or cache objects, with the motivation of minimizing network traffic to improve quality of service, as suggested by Cielsak (Col. 1, line 10-Col. 2, line 3). By this rationale claims 2-8 are rejected.

Art Unit: 2143

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bunjob Jaroenchonwanit whose telephone number is (703) 305-9673. The examiner can normally be reached on 8:00-17:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wiley can be reached on (703) 308-5221. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Bunjob Jaroenchonwanit
Primary Examiner
Art Unit 2143

/bj
9/15/04